

Thomas Wyatt, *Manual of Conchology, according to the system laid down by Lamarck, with the late improvements by DeBlainville*. New York: Harper & Brothers, 1838. Pp. 191; pls. 36.

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## THE DISTRIBUTION OF MELANIA AND NERITINA IN THE BRITISH SOLOMON ISLANDS

BY W. J. EYDERDAM

During 1929 and 1930 while a member of the Whitney South Sea Expedition in the British Solomon Islands I collected large series of *Melania* and *Neritina* in every river, creek, ditch, spring, and body of fresh water traversed on over four-fifths of the islands of the group. Several of the most important islands as well as smaller ones were quite thoroughly worked for freshwater shells. Some of the larger rivers on Malaita, San Cristoval and Choiseul as well as many creeks on these islands and others were collected from mouth to source.

There are several species of *Neritina* with spines that occur almost invariably in the mud at or near the mouths of streams. They like a certain amount of salt or brackish water. Most of the species in a stream occur at or near the coast. There is one species of *Neritina* that has become a land shell and is generally found in native gardens often a quarter mile from a stream. This is *N. cornea*, which is widely distributed and found also in the Philippines. There is another species which it closely resembles, *N. subsulcata*, which is generally found within a couple of feet from water, usually on steep banks.

Most of the islands are volcanic and consequently there is more erosion and action of carbonic acid than in a limestone country. The result of this condition causes most of the freshwater shells to assume a very dilapidated appearance. In some districts the shells are very much corroded and worn.

Some of the Neritinae abound in slow-running streams, some are on moist rocks above the water, while some species, like the Navicellae are found in rapids or under waterfalls. The largest species of *Neritina* are generally found near the headwaters of large streams in the mountains.

An important feature of the Neritinae is their wide dispersal. *N. macgillivrayi* Reeve and *N. petiti* Recluz alike exist in the Fiji and Solomon Islands, while *N. porcata* Gould has been found also in Samoa and Fiji as well as in the Solomons. *N. subsulcata* Sowb. and *N. cornca* L. are also found in the Philippines.

Although most of the *Neritina* and *Melania* are widely distributed in the Solomon group, still their occurrence is often under peculiar conditions.

From my journal dated August 25th I noted the following: “*Neritina* and *Melania* at Kieta, Bougainville Island. It is remarkable what great variation there is in number of species of freshwater shells, chiefly melanians that occur around Kieta, within a distance of less than one mile. There are four small creeks or ditches within this area, each of which has species not found in any of the others, although most of them are found in other parts of the islands. In the first creek on the Kieta side of the brackish water river, which is near the German missionary’s coconut plantation, were found two species *Melania* and two species of *Neritina*. None of these were found in any of the other three creeks which are more or less brackish except at their sources. This first creek falls in a succession of rills in the forest, but flows freely only after a heavy rain. In the next creek (brackish water) which is between Tom Ebery’s store and the Chinese village, about a dozen species of *Melania* and *Neritina* and two species of two other genera were taken. Two species in this creek do not occur in the three others. The third creek or ditch, about 200 yards from Tom Ebery’s store toward the hospital, yielded about a dozen species. Two species occurred that were not found elsewhere. The fourth small creek which is merely a ditch is only 100 yards beyond the third one. Twelve species of *Melania* and *Neritina* were taken of which four species did not occur in any of the other creeks.

“The Melanians are mostly buried in the soft mud while the Neritinas cling to stones. In the fourth creek is a genus represented by one species that was not found elsewhere.”

About one mile from Faisi in the Shortland Islands on Low Fung’s plantation there is a very remarkable freshwater spring of clear cold water. The pool is about twelve feet deep and about

thirty feet across. It comes fresh out of the ground and is not more than 100 yards behind a mangrove swamp on level ground in the jungle. In this spring at least twenty-eight species of freshwater snails were collected in two hours. With thorough collecting it is possible that the spring would perhaps yield a dozen more species of shells. Many of the species taken from the spring were not found elsewhere and seem to be highly localized while others have a wide distribution.

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## THE GASTROPOD FAUNA OF THE INTERTIDAL ZONE AT MOSS BEACH, SAN MATEO COUNTY, CALIFORNIA

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The gastropod fauna here listed was collected during a five weeks' period involving the latter part of the month of June and the month of July, 1933. A total of 126 species are represented in the collection, 21 of which are reported from beyond the previously known range of the species.

The intertidal zone at Moss Beach, consists of a series of truncated strata of fine grained, black, sandstones of Pliocene age, striking at an angle from the shore, so that at low tide an area almost 300 feet wide is exposed on which are developed a large number of tide pools protected from the action of the waves by the edges of the strata which dip toward the sea. The region from which the collections were made lies southward from the town of Moss Beach to Pillar Point, a distance of approximately three miles. Pillar Point marks the northern limit of Halfmoon Bay, a down-faulted block which being low lying, has a sandy bottom and supports an entirely different faunal assemblage from that found at Moss Beach.

In the following check-list species represented in the collection which occur only at Pillar Point and probably have been washed up by wave action from the sands of Halfmoon Bay are indicated by a dagger (†) and the forms represented in the collections from all points by empty shells only are indicated by an asterisk (\*). The gastropod species found are: